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(54) Title: IMPROVED PSEUDOTYPED RETROVIRUSES

(57) Abstract: Pseudotyped retroviruses having viral glycoproteins with modified O glycosylation regions are provided. Also pro-  
vided are methods for making the pseudotyped retroviruses of the present invention and for using the pseudotyped retroviruses for  
transduction of target cells. Cells for stably producing the pseudotyped retroviruses or the present invention are also provided.

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/17577

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 39/12

US CL : 424/199.1

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 424/185.1, 199.1, 207.1; 435/320.1; 536/23.4, 23.72

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- A	WO 01/83730 A2 (KOBINGER et al.) 08 November 2001 (08.11.2001) see claims.	1, 3-9, 13, 14, 17-25 ----- 2, 10-12, 15, 16
X --- A	KOBINGER et al. Filovirus-pseudotyped lentiviral vector can efficiently and stably transduce airway epithelia in vivo. Nature Biotechnology. March 2001, Vol. 19, No. 3, pages 225-230.	1, 3-9, 13, 14, 17-25 ----- 2, 10-12, 15, 16
Y --- A	WATSON et al. Targeted transduction patterns in the mouse brain by lentivirus vectors pseudotyped with VSV, Ebola, Mokola, LCMV, or MuLV envelope proteins. Molecular Therapy. May 2002, Vol. 5, No. 1, pages 528-537.	1-9, 13-14, 17-25 ----- 10-12, 15, 16
X --- Y	JOHNSON et al. Pseudotyped human lentiviral vector-mediated gene transfer to airway epithelia in vivo. Gene Therapy. April 2000, Vol. 7, No. 7, pages 568-574.	1, 3, 4, 7, 9, 14 ----- 2, 8, 13, 17-25

☒ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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## C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P --- Y, P	JEFFERS et al. Covalent modifications of the ebola virus glycoprotein. Journal of Virology. December 2002, Vol. 76, No. 24, pages 12463-12472.	1-3, 5-25 ----- 4
X, P	SINN et al. Lentivirus vectors pseudotyped with filoviral envelope glycoproteins transduce airway epithelia from the apical surface independently of folate receptor alpha. Journal of Virology, May 2003, Vol. 77, No. 10, pages 5902-5910.	1, 3-10, 13, 14, 17-25

INTERNATIONAL SEARCH REPORT

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**Continuation of B. FIELDS SEARCHED Item 3:**

WEST, DERWENT, STN-BIOSIS, MEDLINE, EMBASE, STIC-Sequence search

inventor search, lentivirus, retrovirus, filovirus, Ebola, gene transfer, glycosylation, SEQ ID NO:1